BBC3 siRNA – Bcl-2-Binding Component 3 Isoform 1 (Human)

PRODUCT OVERVIEW

Product Name	BBC3, siRNA
Full Product Name	BBC3 siRNA (Human)
Product Gene Name	BBC3 sirna
Product Synonym Names	PUMA; Bcl-2-binding component 3; JFY-1; p53 up-regulated modulator of apoptosis
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	BBC3 siRNA (Human) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	10,326 Da
OMIM	605854
3D Structure	ModBase 3D Structure for Q9BXH1
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of human BBC3 gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for BBC3 sirna	RNA Interference (RNAi)
Related Product Information for BBC3 sirna	MBS8216448 is an siRNA targeting BBC3. Also known as BBC3 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit BBC3 expression using RNA interference
Other Notes	Small volumes of BBC3 sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BBC3. It may not necessarily be applicable to this product.

NCBI GI #	187829730
NCBI GeneID	27113
NCBI Accession #	NP_001120712.1
UniProt Primary Accession #	Q9BXH1
UniProt Secondary Accession #	O00171; Q96PG9; B9EGI3
UniProt Related Accession #	Q96PG8; Q9BXH1
GenBank Nucleotide #	NM_001127240.2
NCBI Official Full Name	bcl-2-binding component 3 isoform 1
NCBI Official Synonym Full Names	BCL2 binding component 3
NCBI Official Symbol	BBC3
NCBI Official Synonym Symbols	JFY1; PUMA; JFY-1
UniProt Protein Name	Bcl-2-binding component 3
UniProt Synonym Protein Names	JFY-1; p53 up-regulated modulator of apoptosis
Protein Family	Bcl-2-binding component
UniProt Gene Name	BBC3
UniProt Synonym Gene Names	PUMA
UniProt Entry Name	BBC3_HUMAN
NCBI Protein Information	bcl-2-binding component 3
NCBI Summary for BBC3	This gene encodes a member of the BCL-2 family of proteins. This family member belongs to the BH3-only pro-apoptotic subclass. The protein cooperates with direct activator proteins to induce mitochondrial outer membrane permeabilization and apoptosis. It can bind to anti-apoptotic Bcl-2 family members to induce mitochondrial dysfunction and caspase activation. Because of its pro-apoptotic role, this gene is a potential drug target for cancer therapy and for tissue injury. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2011]
UniProt Comments for BBC3	PUMA: Essential mediator of p53/TP53-dependent and p53/TP53- independent apoptosis. Interacts with MCL1 and BCL2A1. Interacts with BCL2 and BCL2L1/BCL-XL. By DNA damage, glucocorticoid treatment, growth factor deprivation and p53/TP53. Ubiquitously expressed. Belongs to the Bcl-2 family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Mitochondrial Chromosomal Location of Human Ortholog: 19q13.3-q13.4 Cellular Component: mitochondrial outer membrane; mitochondrion; cytosol Molecular Function: protein binding Biological Process: caspase activation; release of cytochrome c from mitochondria; positive regulation of protein homooligomerization; apoptosis; release of sequestered calcium ion into cytosol; reduction of endoplasmic reticulum calcium ion concentration; positive regulation of neuron apoptosis; determination of adult life span; response to DNA damage stimulus; negative regulation of growth
Research Articles on BBC3	**1.** Taken together, our results indicate that DNA damage resistance in RCC is reversible, involves the p53-PUMA axis, and is potentially targetable to improve the oncological outcomes of RCC patients.

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